

**What is Claimed:**

1. A method for hiding authentication data within a multimedia data stream having a first media channel and a second media channel, the method comprising the steps of:

obtaining a first set of authentication data;

5 said first set of authentication data being based on data contained in the first media channel; and

hiding the first set of authentication data in the second media channel.

2. The method of claim 1 further including the steps of:

defining a first subset of authentication data;

hiding the first subset in a first region of the second media channel, the first region having a first data hiding capacity;

5 defining a second subset of authentication data; and

hiding the second subset in a second region of the second media channel, the second region having a second data hiding capacity.

3. The method of claim 1 further including the step of generating an identification mark for the first media channel based on a signature of the first media channel, the identification mark defining the first set of authentication data and enabling synchronization between the first media  
5 channel and the second media channel.

4. The method of claim 1 further including the step of generating an authentication value for the first media channel, the authentication value defining the first set of authentication data.

5. The method of claim 4 further including the steps of:  
calculating a one way hash value for the first media channel; and  
mapping the hash value onto an identification mark for the first media channel.

6. The method of claim 1 further including the step of obtaining an active data stream, the active data stream having executable content and defining the first set of authentication data.

7. The method of claim 6 further including the step of obtaining a control data stream, the control data stream further defining the first set of authentication data.

8. The method of claim 7 further including the step of using two-dimensional checksum error correction to generate the first set of authentication data.

9. The method of claim 7 further including the step of using multi-dimensional checksum error correction to generate the first set of authentication data.

10. The method of claim 1 further including the steps of:

generating a second set of authentication data;

said second set of authentication data being based on the data contained in the second media channel; and

embedding the second authentication value in the first media channel.

11. The method of claim 1 further including the step of generating the first set of authentication data based on data contained in the second media channel.

12. The method of claim 11 further including the step of embedding the first set of authentication data in the first media channel.

13. The method of claim 1 wherein the multimedia data stream has a third media channel, the method further including the step of hiding the first set of authentication data in the third media channel.

14. A method for hiding an active data stream within a multimedia data stream having an audio channel and a visual channel, the method comprising the steps of:

hiding a first subset of the active data stream in the visual channel; and  
hiding a second subset of the active data stream in the audio channel.

15. The method of claim 14 further including the steps of:

hiding executable content in the visual channel, the executable content defining the first subset; and

hiding a control data stream in the audio channel, the control data stream defining the second subset.

16. The method of claim 15 further including the step of hiding error correction data in the audio channel, the error correction data defining the control data stream.

17. The method of claim 14 further including the steps of:

hiding the first subset of the active data stream in a first region of the visual channel; and

hiding the second subset of the active data stream in a second region of the visual channel.

18. The method of claim 17 further including the steps of:

hiding executable content in a high capacity region of the visual channel, the executable content defining the first subset; and

hiding a control data stream in a high robustness region of the visual  
5 channel, the control data stream defining the second subset.